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## IBM's OS/2 Warp and its International Strategy

Manuel A. Matienzo  
*Lynn University*

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**IBM's OS/2 WARP AND ITS**  
**INTERNATIONAL STRATEGY**

Manuel Matienzo

November 1, 1995

Dr. Miller

Lynn University

**LYNN UNIVERSITY**

**IBM's OS/2 WARP AND ITS**  
**INTERNATIONAL STRATEGY**

This Thesis is Presented to the Faculty of the  
Department of Business Administration  
To the Attention of Dr. Miller

**by**

Manuel A. Matienzo

November 1, 1995

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## **PREFACE**

It is my intention, through the research in this thesis to present problems and solutions to normal business and marketing decisions that take place on a day-to-day basis in IBM Corporation. Also, OS/2 new version named Warp will be studied to an extent. OS/2 version 3 is not only a multitasking, multiprocessing operating system, but is also is IBM's most recent and advance piece of software they have ever produce.

It is a world of choices. Just as IBM hopes OS/2 warp will fulfill users operating systems needs, I will try to fulfill the needs of IBM to release a better product compare to Microsoft and also the changes IBM could do to dominate the market. There are a lot of choices these days when deciding which operating system to trust your data to, just as there are many studies conducted on how the operating system would perform in the marketplace. Whether people are just beginning, are familiar with computers, or have lots of technical expertise, what is on these pages might open the minds of some people on how to conduct regular business.

This Thesis is divided into different sections as explained in the Table of Content. Section 1 is the Introduction: These sections explain in advance what IBM OS/2 Warp is. Section 2 is IBM Corporation: In this section, details of IBM and the company's product line and annual sales are included. Section 3 is OS/2 and OS/2 Warp: This section explains the differences between new and old version and details

of both. Section 4 is IBM Business Strategy. Section 5 is IBM's Marketing Strategy. Finally, conclusion and references follow.

## **Introduction**

To warp can mean to move (as a ship) by hauling on a line attached to a fixed object; it can also refer to the rope used for that purpose. What about the sci-fi definition? It refers to temporarily bending three-dimensional space in four dimensions to shorten the linear distance between a spaceship's origin and destination points, and thus reduce travel time. That's sort of covered in Webster's Ninth: 'a twist or curve that has developed in something originally flat or straight.' A few less amusing definitions can also be found. As a verb: 'to cause to judge, choose, or act wrongly.' As a noun: 'a mental twist or aberration.'<sup>1</sup>(Zeichick: 7).

International Business Machines (IBM) decided to release its OS/2 Warp Version 3 operating system in October 1994, before Microsoft released its rival Windows 95 platform, but it now looks that IBM marketing strategy may have failed. IBM sought to gain a leg on the market in releasing Warp before Windows 95. Potential converts to OS/2, however, will probably be discouraged from using the platform once they discovered how difficult it is to install. Windows 3.1 is also difficult to install and is known to crash on occasions, but at least it is familiar to the tens of millions of Windows users. OS/2 is a new commodity and IBM has not helped its cause with the platform's clumsy installation process. Moreover, Windows comes pre-installed on many PCs thus

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<sup>1</sup>Zeichick, Alan., "Happy New Warp" *OS/2 Magazine*, January 1995: 7.

This article states the new perspective of OS/2 Warp. It states that OS/2 Warp was the best thing to happen to IBM and the OS/2 community. Now OS/2 needs to gain momentum and gain market acceptance.

furthering its customers base. IBM's OS/2 is not as widely available as a bundled package.

Operating System 2 Warp or OS/2 Warp Version 3 is an advanced, 32-bit operating system that runs on 4 megabytes of memory systems and provides excellent response time to both 16-bit and 32-bit applications. OS/2 Warp is the operating system that offers True Multitasking, Crash Protection, and Internet Access while at the same time being windows friendly. Also new to Warp is a feature called Play at Will, which enables the computer to recognize instantly when the user has added a plug-in PCMCIA device, a credit card size module that can contain a data modem, a fax modem or various other peripherals use by computers.

## **IBM Corporation**

### **HISTORY:**

Since the end of World War II, the computer industry has grown from a standing start into one of the biggest and most profitable industries in the United States. The computer industry now comprises thousands of companies, making everything from printout paper and floppy disks to multimillion dollar high-speed supercomputers. It employs millions of people and generates tens of billions of dollars in sales every year.

The computer industry has some major historical roots, and IBM is one of those traditions. Herman Hollerith, the great American inventor and

entrepreneur, devised a punch-card tabulator in the late 19th century and whose company eventually became IBM. In 1911, Hollerith's small tabulating machine company has emerged with three other firms to form the Computing- Tabulating- Recording Corporation, which changed its name to the International Business Machines Corporation in 1924. IBM became one of the most respected and profitable companies in the country, making most of his money by manufacturing and leasing punch-card tabulating equipment.

International Business Machines Corporation (IBM) are manufacturers of mainframe and personal computers and computer peripheral equipment. IBM's business is in the field of information systems. Nearly all the company's products, from large processors to personal computers and even network communications systems, are designed to record, process, communicate, store and retrieve information. IBM helped pioneer the information processing industry, offering state of the art products as the industry evolved from electromechanical punched card machines and vacuum tube calculators of the 1940s to today's powerful electronic computers that execute instructions in billionths of a second. Throughout this evolution, IBM technology has continued to lower the costs of computing, provide more function and extend the range of information systems. IBM executives said the "the character of the company is shaped by its three basic beliefs: first, respect for the individual-caring about the dignity and rights of each person in the organization; second, customer service-giving the best service of any company in the world, and third, excellence-

believing that all jobs and projects should be performed in a superior way.<sup>2</sup>”(IBM Yesterday and Today: 1).

### **PRODUCTS:**

IBM's product line spans the entire range of information systems, equipment and services. The company develops, manufactures, markets and services processing machines, software and systems, desktop computers and terminals, office systems, industry systems, printers, and other equipment and supplies. As IBM's products address a rapidly expanding number of uses and reach more diverse groups of users, the company has intensified its commitment to deliver defect-free products and services. “Special attention is focused on designing and producing products that are easy to install and use and require little maintenance.<sup>3</sup>”(IBM Yesterday and Today: 7).

The range of the company's product line is characterized by the different offerings the computer giant has. Some of this current offerings are the information processing systems for business, government, engineering and scientific use. Others are office systems and desktop workstations, peripherals that attach to information processing systems, displays that attach to regular computer systems, industry-oriented systems, and finally program products.

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<sup>2</sup>International Business Machines., “IBM: Yesterday and Today” International Business Machines Corporation,

This little reference book explains some of IBM's Corporation history. It covers most of the 70,s and the 80,s. Good reference book.

<sup>3</sup>International Business Machines., “IBM: Yesterday and Today” International Business Machines Corporation,

This little reference book explains some of the aspects of IBM's corporation history. It cover most of the 70's and the 80's.

## **ORGANIZATION:**

As of December 31, 1994, IBM has approximately 256,207 employees and does business in over 130 countries around the world. Products are marketed through more than 800 branch offices, 126 IBM Product Centers and a wide network of authorized dealers, distributors and remarketers. IBM's 1993 total sales exceeded the \$62,700 million mark and revenues before taxes exceeded \$64,000 million. Most of this company's business is done through subsidiaries. There are many subsidiaries of IBM but only two of them are directly related to IBM. The first one is IBM World Trade Europe/Middle east/Africa Corporation, through this subsidiary, IBM operates in 83 countries and includes 15 plants, nine research and development facilities and nine scientific centers. The second is the IBM World Trade Americas/Far East Corporation, this subsidiary operates in 46 countries and five locales and includes eight plants, two laboratories and four scientific centers. Also, IBM has established entrepreneurial units called Independent Business Units to pursue promising new business opportunities in areas such as industrial automation, network services and finally education. In addition, IBM is a joint owner with Aetna Life & Casualty Company in a satellite communication partnership called Satellite Business Systems.

There are some boards or maybe better yet groups of professionals that are responsible for the day-to-day operations of IBM. The IBM Board of Directors oversees the organization, with responsibility for the management of the business

and affairs of the corporation. The Corporate Management Board provides overall direction to the company. IBM has two permanent committees. the policy committee which consists of the chairman of the board, the vice chairman and the president, and it is responsible for long-term policy development, financing and finally external relations. The Business Operations Committee, consisting of six senior corporate officers, is responsible for the day-to-day operations of the business.

### **OS/2 and OS/2 WARP**

#### **OS/2:**

OS/2 version 2.1 is a virtual memory operating system. It is capable of managing and using more memory than what is physically installed in the computer. All versions of the OS/2 system have been designed to work with the Intel 80x86 family of microprocessors. The operating system has three major benefits: freedom from the 640K barrier, an integral graphical user interface, and powerful multitasking. Multitasking is what makes this system different from other operating systems. "Multitasking is a sleight of hand that makes it appear that the computer is doing more than one thing at a time."<sup>4</sup>(Moskowitz & Kerr: 83). In actuality, the operating system executes one portion of code for a specified period of time, then it's a breeze the execution and switching to another.

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<sup>4</sup>Moskowitz, Charles., PC Computing, April 1994: 83-85.

The author in this article explains the process of using OS/2 version 2.0. Also, some of the characteristics of this operating system are describe.



“When IBM began shipping its first release of OS/2 2.0 in early 1992, most industry experts thought it would bomb.”<sup>5</sup>(Semich: 43). Meantime, the world was waiting for Windows NT which was a 32 bit environment operating system. For IBM’s sake, Microsoft released the Windows version late in 1993 and to a surprise for everyone, Windows NT was bomb even more than OS/2. Meanwhile, OS/2 has been on a roll. By the end of 1993, IBM had sold over 4 million copies of OS/2. 1994 alone, IBM sold another 5 million units of OS/2 and much of that is through retail outlets. That adds up to a potential market of nearly 10 million users for OS/2 applications by the beginning of 1995.

With OS/2 selling at four times the rate of Windows NT, it looks as though IBM’s OS/2 has at least for the moment won a battle to become the 1994 champion of 32-bit desktop operating systems. “Some leading developers seem to agree; but just as potential OS/2 users and developers held back in 1992, waiting to see what Microsoft had to offer in Windows NT, many are now pinning their hopes on the Chicago 32-bit version of Windows code named Windows 95.”<sup>6</sup>(Semich: 47).

### **OS/2 WARP:**

The current version of OS/2 is being replace by the most awaiting version

3. The new version is called OS/2 Warp and it is a more sophisticated system.

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<sup>5</sup>Semich, William J., “Surprise! OS/2 Is Taking Off” Datamation, April 15, 1993: 43-47.

This article looks at how IBM is selling four times the rate of Windows NT. It looks like OS/2 for the moment has won the battle to become the desktop operating system for the future.

<sup>6</sup>Semich, William J., “Surprise! OS/2 Is Taking Off” Datamation, April 15, 1993: 43-47.

This article looks at how IBM is selling at the rate of four times that of Windows NT. It looks like OS/2 for the moment has won the battle to become the desktop operating system for the future.

For starters, OS/2 Warp is the most advanced operating system available for personal computers. With Warp, OS/2 provides enhanced features that changed the way people used computers. "OS/2 Warp emerged as a platform on which highly integrated applications could dynamically exchange data in a seamless fashion."<sup>7</sup>(Minasi: 1). The new system environment also provided a more colorful interface with proportional spaced fonts, a wider range of video and printer drivers, and updated color screen graphics. Furthermore, this system offers Windows users a better multitasking, interfacing, and more control over DOS and windows sessions than the users of 16-bit environments.

OS/2 Warp, version 3 is the latest version of the operating system that has won more than 45 top industry honors. And even now, Warp is optimize to give users a terrific performance in low memory environments with a host of new features that make it even easier to use. OS/2 warp true multitasking and multithreading capabilities allows the user to work in the most natural and productive way. Users can even run DOS and Windows applications at the same time under one operating system.

This system offers some advantages that other operating systems don't have. For one thing, OS/2 Warp is a relatively easy system to install states IBM. IBM focused on this point as a must for many reasons. Many computer users don't really know how to install new systems on their computers and IBM solve this problem by making Warp an easy to install system. During installation,

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<sup>7</sup>Minasi, Mark., Inside OS/2 Warp Version 3, New Riders Publishing, Indianapolis, Indiana, 1995.

This book is the complete process on how to use and optimize the new OS/2 Warp. The author is one of the most intelligent computer writers of the decade.

Warp recognizes many devices that could not be supported under earlier versions of OS/2, and it offered a much less cumbersome process for switching between various modes. Network-based installations is substantially improved over earlier versions of OS/2, with expanded response-file capabilities to support multiple versions of windows, Super VGA, and multimedia support, and documentation for a number of shortcuts that speed the process. Warp also provides an on-line tutorial that includes a Windows button that is used to asks for comparisons of OS/2 features with similar features of Windows.

Early purchases reported generally positive experiences with Warp.

“‘Warp appears to be pretty much everything IBM said it was,’ said Walter Czerniak, director of computer and telecommunications operations with Northern Illinois University, in Dekalb.<sup>8</sup>”(Foley: 32). Other reports say that Warp is at least as solid as OS/2 2.11 and that if all software and hardware peripherals are in order, then a successful installation happens in a shot. Another user said “OS/2 appears to be a versatile operating system, including a terrific performance of Windows applications-even on an old machine like a 386 SX with 8M bytes of random access memory.<sup>9</sup>”(Foley: 32).

There are some disadvantages being heard of the Warp system in recent articles. The most notable problem the industry is seeing is that Warp shows

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<sup>8</sup>Foley, Mary Jo., “Users See Fewer Warp Bugs” PC Week, November 21, 1994: 31-32.

This article explains that initial users are finding few bugs in IBM’s Warp OS/2 operating system during installation, with only a handful of hardware and software peripherals problems being reported on OS/2 forums.

<sup>9</sup>Foley, Mary Jo., “Users See Fewer Warp Bugs” PC Week, November 21, 1994: 31-32.

This article explains that initial users are finding few bugs in IBM’s Warp OS/2 operating system during installation.

signs of having been rushed to market. The first copies sent to retailers were damaged by a serious bug that would have aborted the installation process on most computers. Other flaws is that all versions of OS/2 have been short on applications. IBM's software's catalog contains only three obscure word processors. "IBM has worked to persuade developers to write OS/2 programs, providing them with both financial incentives and tools to help them convert Windows software. But there have only been a trickle of OS/2 product announcements."<sup>10</sup>(Wildstrom: 15).

Other problems or disadvantages is that at present, Warp can only be installed over OS/2 2.2 by reformatting the hard disk, which is not an acceptable option for most computers devotees. This means that everything a user has on its computer will be lost when reformatting the hard drive. Warp has other critical bugs that have manifested on a variety of systems and configurations and have done little to increase its appeal to users waffling over whether to try OS/2 or wait for windows 95. Also, IBM claims that Warp will run comfortably in 4M bytes of RAM. "When Warp's installation program detects a 4M bytes system, it's designed to compromise multimedia and video support in the interest of reducing memory footprint."<sup>11</sup>(Coffee: 36). When installing the system in 4M bytes what happens is that the support for multimedia and video are disabled.

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<sup>10</sup>Wildstrom, Stephen H., "The Word on Warp: Whoops" Business week, November 21, 1994: 15.

This article states that IBM's Warp promised users many of the same functions of Microsoft's Windows 95, but does not deliver. It also mentions that Warp seems to be a product that was rushed to market.

<sup>11</sup>Coffee, Peter., "If Warp the Answer, What is the Question" PC Week, November 7, 1994: 36.

The author explains the initial impressions of IBM's Warp upgrade and he also indicates that this new product has some potential.

OS/2 using only 4M bytes also takes three times as long as Windows to run Windows applications, which will discourage even the most eager fan from adopting this technology.

## **BUSINESS STRATEGY**

Louis Gerstner Jr. is IBM corporation new chairman and Chief Executive Officer. During the years, Gerstner has a record of being spontaneous with marketing budgets while at the same time slashing other costs. This by no means mean that IBM's marketing executives and some of the agency management are off the hook. Louis Gerstner was the chairman and Chief Executive Officer at RJR Nabisco Holdings Corporation before accepting the top job at the troubled computer giant best known as IBM. Mr. Gerstner said, "I would draw on my experiences at RJR and American Express Corporation to bring a customer's perspective to IBM."<sup>12</sup>(Johnson: 3). Gerstner is likely to expand on the independence initiatives that John Arkes began before announcing his resignation because of pressure from the IBM's board of directors.

Louis Gerstner lacks expertise and experience in the field of technology, so he is sure to delegate computer marketing responsibilities to executives who know the technical field. That's good news for independent units such as the IBM Personal Computer Co., which has proven an agile competitor in the PC price wars since the division was set up last summer. One high-level executives

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<sup>12</sup>Johnson, Bradley., "How Gerstner Will Shape IBM Marketing" Advertising Age, March 29, 1993: 3,46.

Louis Gerstner Jr. is expected to start as chairman-CEO of IBM Corporation on April 1, 1993. Gerstner will likely delegate computer marketing responsibilities to executives who know the field.

at an IBM agency said “Mr. Gerstner is likely to create clearly segmented units similar to those at RJR, including Nabisco Biscuit CO., R.J. Reynolds Tobacco Co., and the LifeSavers division.<sup>13</sup>”(Johnson: 46).

One of the first things Gerstner had on his mind when taking over IBM was to restructure the organization. To restructure means “striving for more efficient corporation that can compete internationally and globally by selling off unsatisfactory product lines and divisions, closing down unprofitable plants, and often laying off hundreds or thousands of employees.<sup>14</sup>”(Berkowitz: 76).

Restructuring often happens very fast. It often involves a corporate takeover or the purchase of a firm by outsiders. The effect of the restructure is usually a huge reduction in the number of middle managers. The results is far fewer levels from the bottom to the top of the corporation, far fewer managers, far different employment opportunities for those entering the work force, and far greater problems for restructured companies in gaining loyalty from their employees.

One effect of restructuring on giant corporations like IBM is their increase confidence on outsider. This outsiders get contracting work that formerly was done in-house by employees in marketing research, advertising, public relations, data processing, and training departments. Bringing outsiders to IBM Corporation is the first phase in the restructuring process under Gerstner. Mr.

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<sup>13</sup>Johnson, Bradley., “How Gerstner Will Shape IBM Marketing” Advertising Age, March 29, 1993: 3,46.

Gerstner will shape IBM Corporation and it is likely that he will create groups of executives to take care of marketing responsibilities within those executives fields.

<sup>14</sup>Berkowitz, Eric N., Marketing, Irwin, Boston MA, Second edition 1989.

This reference book contains all the details of marketing. From advertising and personal sales to marketing and business strategies, everything is included.

Gerstner knows a little bit about computers and a lot about leadership, which may be what IBM needs. For now, Gerstner decision is to recruit outsiders for the implementation of a successful restructuring. "Most observers expect Mr. Gerstner to speed up a decentralization strategy begun under Mr. Akers. But some worry that splitting up IBM into independent Baby Blues could destroy a valuable asset: IBM, despite its financial and sales problems, is the one worldwide source with the broadest array of technology."<sup>15</sup>(Johnson: 46).

The second phase of IBM's restructuring process was launched announcing the reorganization of its \$11 billion software business and its sales operations. The first phase of its turnaround focused on rebuilding the balance sheet and cutting costs before turning to concentrate on expanding its business. This first phase means that IBM is going to cut tens of thousands of jobs to restore profits and stay competitive with its more active rivals. "The International Business Machines Corporation said yesterday that it would cut 1,000 employees in its chip and software operations as part of its previously announced cutback program."<sup>16</sup>(Bloomberg Business News: 41).

"Industry analysts said Gerstner, who implemented the successful financial turnaround at IBM since taking the helm at the computer giant in 1993, is focusing on boosting revenues now that its balance sheet is in order and its costs

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<sup>15</sup>Johnston, Bradley., "How Gerstner Will Shape IBM Marketing" Advertising Age, March 29, 1993: 3,46.

Gerstner is expected to start as CEO of IBM by the beginning of 1993 and it is expected that he will restructure IBM marketing department and other managerial decisions.

<sup>16</sup>Bloomberg Business News., "1,000 to Lose Jobs in Chip and Software Operations" The New York Time, June. This column talks about IBM cutting 1000 employees from the previously announced cutback program.

are lower.<sup>17</sup> (Poletti: 1). IBM would implement a unified software group that will power further growth to develop a application business. This new group will be headed by John Thompson, currently in charge of operating systems development. The group will include three divisions: Software solutions, Personal Software Products, and Networking software.

A big chunk of IBM's software business comes from its proprietary mainframe software business, where it sells operating systems, database software, tools and other programmers to IBM mainframe computer customers. An estimate of a little under \$7 billion in software revenues are associated with mainframes. The rests comes from personal computers, minicomputers and workstations. While mainframe computers have been rebounding in the past year, they do not approach the growth potential of the PC sector of IBM's software business, dominated by its OS/2 warp operating system.

Being a large corporation, IBM is starting to organize a product or marketing organizational structure. This product organizational department will be in charge of OS/2 Warp and only Warp. Unlike a functional department, the product division resembles a separate business within IBM. The divisional department will focus primarily on the business operations related with Warp. This division will be accountable for profit or losses, and will compete against Microsoft Windows 95. But this division is not a separate business in one

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<sup>17</sup>Poletti, Therese., "IBM Revamps Software Division as Gerstner Launches 2nd Phase" America Online, January 11, 1995: 1-2.

Analyst state that Gerstner is focusing on boosting revenues now that its balance sheet is in order and costs are lower.



crucial aspect: It is not an independent entity. That means that the division manager cannot make decisions as freely as the owner of a truly separate enterprise because he or she must still report to IBM's central headquarters.

After the restructuring process, IBM must focus on their line of products and services. Including in here are IBM's software and hardware products as well as their new operating system. IBM finally released their new software and operating system late 1994, this gave IBM an advantage over Microsoft and their new Chicago version of Windows which will arrive late 1995. Microsoft's Chicago is intended to be a 32-bit operating system, meaning that it can process operations with 32 pieces of data at a time. IBM's OS/2 warp already processes 32-bits. So why IBM is not gaining a market share over Microsoft Corporation? The answer to that question is a complicated one and it has to do with the software industry, not IBM. Wally Casey, director of marketing for IBM Personal Software Products Company in Texas said that "IBM's strategy for OS/2 Warp has been unclear", meaning that IBM needs to implement a very impressive marketing strategy for this new product.

One big problem IBM is facing right now with OS/2 Warp is the lack of support that other software developers are giving Microsoft. "OS/2 hasn't had anywhere near the support that Windows receives from software developers, the companies that make all the applications like spreadsheets and word-processing programs that work with software operating systems like windows and OS/2. And, quite simply, Microsoft has done a far better job at marketing its software

that IBM.<sup>18</sup>”(Flynn: 8). As a result of the ongoing process, about 50 million people all over the world use windows while about 4 million use OS/2. All these problems should be ending for IBM. This is because last Spring, IBM launched a new and very aggressive campaign to “raise the noise level” in Mr. Casey words, by convincing customers that OS/2 is everything Windows is and more. Eventhough the marketing campaign went smooth, the problems with IBM and the software developers persisted.

In an effort to counteract the expected Windows 95 (Chicago), IBM is going to launch aggressive technical and marketing programs designed to influence Microsoft developers to port their applications to OS/2. IBM will begin selling One Ups Smart Version 2.0 in January 1995,(SEE CHART). This new program should allow Windows 95 developers to quickly port up to 70 percent of their 32-bit code to OS/2. This process would save developers tens of thousands of dollars in development costs in the years ahead. This strategy represents a marked departure from previous IBM attempts to crack up software developers support. “In the past, IBM has forked over millions of dollars to independent software vendors to encourage them to either create new applications from the ground up or port their existing Windows applications. Those efforts often resulted in OS/2 applications that offered little advantage over their Windows counterparts.<sup>19</sup>”(Scannell: 5).

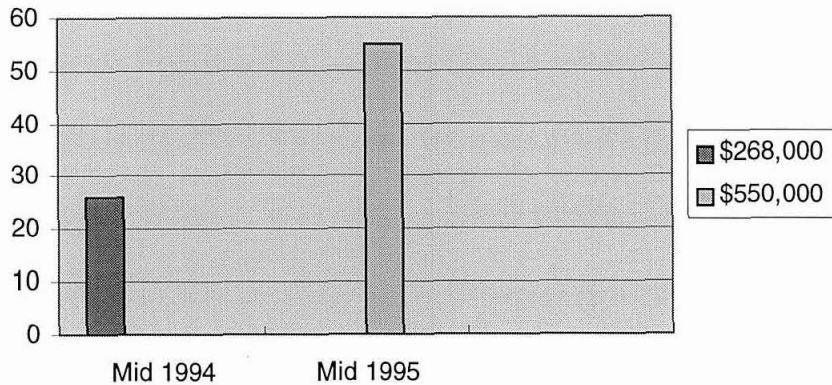
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<sup>18</sup>Flynn, Laurie., “Unsung OS/2 Many Finally be Getting Some Respect” The New York Times, July 31, 94: 8.

This article relates to IBM launching an aggressive campaign to raise the noise level in the competition.

<sup>19</sup>Scannell, Ed., “Some Returns Dog OS/2 Warp Debut” ComputerWorld, December 26, 1994: 5-7.

The author relates his experience with the product and states in the article the users confusion in trying to get the system to work.



\*Projected, assuming the availability of One Up's Smart Version 2.0

This latest marketing strategy appears to be very practical for IBM and OS/2 users. Using the One Up tools places the responsibility of converting code on applications to developers, but IBM is still not happy with the expected results. So IBM is out again trying to sell windows users the wonders of OS/2 Warp, but at least this approach seems to make sense for developers. “We would rather see IBM invest time and money to make Warp binary compatible with Windows 95,” said Hilmi Ozguc, senior product manager of OS/2 applications at Lotus Development Corporation in Cambridge, Mass.<sup>20</sup> (Scannell: 7).

IBM may also intend to aggressively support developers after they port their Windows applications to OS/2. IBM is spending tens of millions of dollars to help developers with a cooperative advertising campaign of their products as well as providing training courses to educate and better train IBM's Windows

<sup>20</sup>Scannell, Ed., “Some Returns Dog OS/2 Warp Debut” *ComputerWorld*, December 26, 1994: 5-7.

Users state that IBM should give a little more time for testing before going to the market. This is because of the confusion users are experiencing.

users. "Giving [developers] an inexpensive way to get a good return on investment on an OS/2 application from a Windows user base is just the first step," said Richard Dews, president of One Up in Dallas. To a certain extent, IBM is banking on the idea that software developers consider OS/2 an open frontier in an otherwise crowded software business.

The biggest uncertainty for OS/2 Warp and IBM is whether more of the major software companies turn their sights to OS/2 in a serious manner. In IBM's favor is a sentiment shared by many computer users and developers that Microsoft's products don't always live up to the company's bold promises. It all comes down to people tired of Windows promises and then not been able to make it work accordingly to its specifications. Also, lackluster sales of Windows NT, Microsoft's high-end version of Windows for corporate network, have not hurt OS/2 sales. That might seem to give IBM an advantage over the existing Microsoft products.

Another advantage that IBM might have over Microsoft is their ability to make a productive and accurate SWOT Analysis. The acronym SWOT refers to a simple and effective technique IBM can use to appraise in details their internal strengths, and weaknesses and their external opportunities and threats. By making a SWOT Analysis, IBM's goal is to help themselves identify the strategic related factors that have a major effect on them. However, all factors in this analysis are not of equal value, so the goal of IBM is to identify those critical factors that can have a major effect on the corporation and then build

vital strengths, correct their weaknesses, exploit significant opportunities, and definitely avoid the threats. A SWOT Analysis of IBM's situation in regard to OS/2 Warp would look and reveal the factors mention next.

### **IBM'S SWOT ANALYSIS:**

- STRENGTHS:**
- First in the business with a 32-bit, multitasking, Internet-accesses, crash-protected, Windows-friendly operating system.
  - Multimillion dollar advertising campaign all over the world.
  - Relatively inexpensive for an operating system.
- WEAKNESSES:**
- Installation problems even with experience users.
  - Product could have use another few weeks of testing.
  - Technical support needs to be more professional and experienced.
  - Little market momentum
  - Few applications designed to exploit OS/2 features.
- OPPORTUNITIES:**
- Gain market share while Microsoft still has problem delivering Windows 95.
  - International markets growing rapidly.
  - OS/2 Warp features are comparable to Microsoft's Windows 95.
  - Microsoft must meet huge market expectations.
- THREATS:**
- Microsoft Windows 95 enters international markets these summer.

- Microsoft Windows 95 is the top priority for software application developers.

Thanks to Warp, OS/2 has made substantial progress during the last year. Although it is still underrated and somewhat neglected by the trade press, OS/2 is used considerably more than expected. Even Bill Gates, Microsoft Chairman and Chief executive Officer, has finally admitted that OS/2 is a force to be reckoned with in the marketplace. OS/2 enthusiastic partisans, on the other hand, have pointed to OS/2 Warp's success as evidence of sure victory in the end for OS/2 versus the forces of Windows everywhere.

OS/2 success will depend on whether IBM as a whole can support OS/2 as a company-wide strategic effort. While progress has been made toward this end, it has been painfully slow. "The truth, however, for the moment at least, remains somewhere in the middle. OS/2 is certainly doing better than ever and better than the consensus had anticipated, but is as premature to celebrate victory for OS/2 warp today as it would have been to mourn its much publicized death two years ago.<sup>21</sup>"(Zachmann: 17). Despite substantial advantages in the last year or so, OS/2 has a very long way to go against rough competition. In addition, OS/2 has some obstacles of its own to overcome. This means that IBM has plenty of room to do improvements on OS/2 Warp for the future.

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<sup>21</sup> Zachmann, William f., "Where IBM Needs to Improve with OS/2" OS/2 Magazine, March 1995: 17-18.

The author explains that OS/2 is certainly doing better than was expected and the success of Warp depend on more or less Microsoft's Windows 95.

OS/2's success ultimately depends not only on how well Microsoft delivers on its promises for Windows 95, but on how swiftly and how well IBM improves its commitment to OS/2 and specially its marketing. IBM can win by doing a better job than Microsoft does to provide an operating system that meets customer's real needs and by solidly backing their operating systems. However, IBM cannot win without further improvement to its commitment to OS/2.

Still, another issue concerning Gerstner is IBM's position internationally. According to Gerstner, IBM's main focus on international business is to increase their market share, their return on investment, and to gain access th more reliable resources around the world. By expanding overseas, IBM is increasing their chances for achieving a certain return on their investment and stable or growing profits. To continue growing, though, IBM have to expand into international markets. Companies like IBM that expand internationally tend to be "oligopolistic"; that is, they tend to dominate their domestic market, either because their products are highly desirable or because their size lets them reap economies of scale.

The globalization of business is one of the most important changes in the external environment of most organizations including IBM. A growing number of companies operate production facilities outside the United States and market their products abroad. In 1991, IBM ranked number 36 out of the top 100 U.S. companies that deal internationally.

## **MARKETING STRATEGY:**

Marketing can be defined as a “process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.”<sup>22</sup> (Berkowitz: 7). This definition stresses the importance of beneficial exchanges that satisfy the objectives of both, those who buy and those who sell ideas goods and services whether they are individuals or organizations like IBM. In this case, a successful company like IBM who is already in international markets would enter the era of technology and advancements in those markets.

International marketing is simply marketing across national boundaries and regions. The main reason for IBM to do international marketing is to exploit a better business opportunity in terms of increase sales and profits. And with the General Agreement on Tariffs and Trade (GATT), companies like IBM would seek and benefits from this more favorable conditions for world trade.

IBM likes to call themselves a transnational corporation in which they have a global orientation to marketing its products. IBM runs its business and makes its decisions based on all the possible choices in the world, and not only simply favoring for domestic options because they are more convenient. Not only IBM exports products but also conducts research and development employing foreign personnel and manufacturing in foreign countries. The

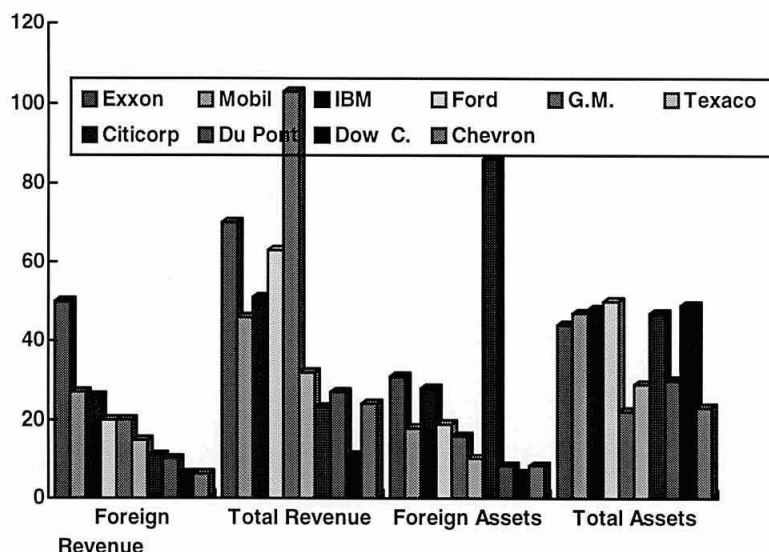
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<sup>22</sup>Berkowitz, Eric N., Marketing, Irwin, Boston MA, 1989 Second edition.

This reference book contains all the marketing necessary to conduct business and marketing decisions.



following chart shows the 10 largest U.S. companies dealing internationally and the revenues in billions each of those companies represent.



As international marketing grows, firms like IBM that are selling both consumer and industrial products in foreign countries face a dilemma in their strategy. IBM should use a global and a customized strategy in foreign markets with the products they sell and especially OS/2 Warp. The global approach IBM is implementing assumes the the way the product is used and the needs it satisfied are universal and therefore the marketing mix not need to be adjusted for each country. The customized approach IBM is designing entails a different marketing plan for each nation based on the language, values, and customs. This two approaches seems to be quite different and contradicting, but the mix between the two is what IBM is doing and for now is working to their standards.

The marketing of IBM OS/2 Warp is guided by the ability of what is produced and marketed to satisfy computers users wants and needs. IBM holds the key to achieving its international and organizational goals. These goals consists in determining the needs and wants of the target markets and delivering the desired satisfactions mare effectively and efficiently than Microsoft. As an IBM business philosophy, OS/2 success in 1995 really depends more on what Microsoft does with Windows 95 than anything IBM can do. If OS/2 fails to take over the desktop business, it will not be for a lack of trying on IBM's part but computers users who are loyal to Microsoft Products.

IBM has more riding on OS/2 than ever before. Warp is the first piece of a new desktop software plan that eventually will involve object-oriented software. This is a technique for building programs from prefabricated blocks that IBM thinks will give OS/2 Warp a market edge. The immediate plan calls for moving OS/2 onto different kinds of hardware, including machines based on the IBM-Motorola PowerPC chip. This would be done with something called the workplace microkernel which is a layer of software on top of which various operating systems personalities can be added.

But the first microkernel product, OS/2 for the PowerPC, has hit snags. Test copies have not been released to developers and may not be until yearend. That's one reason IBM has held off introducing its own PowerPC systems for the PC market. Not just software is at stake. The combination of OS/2 Warp and

PowerPC machines is one of IBM's strategy for winning back leadership in the all important desktop computing market.

IBM's main bundling marketing strategy is a prescription for destroying the Windows service applications market and damaging the market for core business software. IBM's promotional strategy in response to applications and software could be describe as a Bonus Pak. This Bonus Pak is IBM's most forward and best selling sales promotion features on any of its products. The Bonus Pak includes a word processor and a spreadsheet, plus a host of third party software. These free goodies help sell the product and immerse those vendors whose software is bundled. But such a strategy also leaves out in the cold any vendor whose software was overlooked.

While bundling is arguably anticompetitive, the issue has expanded with Microsoft Windows 95. IBM's Warp cannot claim the same high level of integration of Microsoft's standards like their communications process embodied in Object Linking and Embedding (OLE). Take for instance, Lotus SmartSuite 3.0 for Windows. This software is a complete office package that includes word processor, Lotus spreadsheet, a database, a calendar software and Freelance Graphics presentation program. However, Lotus SmartSuite programmers were able to provide support for only part of the OLE specifications. On the other hand, Microsoft Office and IBM's Warp support OLE across the board. It is so tightly integrated with Warp and Windows 95 that removing it to make room for SmartSuite may not be practical after all.

“I’ve long thought that by selling both systems and applications, Microsoft and Warp would gain advantage that could eventually terminate competition among Windows and Warp vendors.<sup>23</sup>”(Patton: 57). Microsoft and IBM cannot be blame for trying to create a complete operating environment. But competition is, for all practical purposes, “‘locked out’ when operating systems developers can integrate their own applications and so much free third-party software in a single, seamless package.<sup>24</sup>”(Patton: 57).

IBM argues that Warp is superior to the current Windows and more dubiously that it is technically better than windows 95. But computer users don’t care about the technical superiority of operating systems, they just want software they need to get the job done. When Windows 95 debuts this summer, it will unleash an amount of improved word processors, database managers, spreadsheets, and other programs. But none of this new programs would run under OS/2 Warp. All versions of OS/2 including warp have been short on applications. OS/2 has been able to survive because most of its 6 million or so users run software designed for MS-DOS or Windows. But OS/2’s ability to run windows programs depended on a licensing agreement between IBM and Microsoft. That agreement does not extent to windows 95, so software for that system won’t work on Warp.

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<sup>23</sup>Patton, Carole., “Bundles are Bad News” ComputerWorld, November 14, 1994: 57.

The consequences that corporations face when they include other products as a bonus with the goods and services they offer are discussed.

<sup>24</sup>Patton, Carole., “Bundles are Bad News” ComputerWorld, November 14, 1994: 57.

The author explains the consequences a company has when they include bonuses on goods and services.

One advantage that IBM is taking over Microsoft is their capitalization of the Internet (the information superhighway). Warp will include software that simplifies the process of connecting to and navigating the Internet. IBM says it will provide access through its Advantis network and is likely to charge in the range of \$10 per month for 10 hours of connection time. With Internet hysteria sweeping the world, IBM is seizing the opportunity to position OS/2 Warp as a road warrior on the information superhighway. The first step in doing this is that IBM included a limited version of Hilgraeve's new terminal emulator. Also, HyperAccess which includes a new graphical interface and the first native OS/2 version of Compuserve Information Manager is included as a marketing tool to sell the new operating system. "The main weapon is the Internet Access Kit, which is a slimmed-down version of IBM's older TCP/IP for OS/2 access kit with the main network portion stripped away and a little polish added."<sup>25</sup>(Antoniades: 12).

## **CONCLUSION:**

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<sup>25</sup>Antoniades, Alexander., "IBM Swings the Big Stick" OS/2 Magazine, January 1995: 11-12.

This article states when IBM announced OS/2 Warp in Grand Star Trek inspired style. IBM is trying to capitalize on both the Internet and a lot of popularity.

In conclusion, the release of OS/2 Warp is very exciting, but it is the changes taking place in IBM that will determine its fate. Now, I'm not trying to be naive. But of all we know, IBM is trying to make OS/2 Warp look as successful as possible to entice software developers, influence journalists, impress Wall Street, attract or hold onto Fortune 1,000 customers, and annoy Bill Gates (Microsoft's CEO).

Microsoft's Windows 95 will be released this summer, that means that IBM needs to improve everything they can to be able to compete against. But all IBM is doing now is making it tougher for Microsoft. This all means that what IBM is doing is working. IBM's external competition from Microsoft is tough enough. IBM snoozed through the late 1980's while Bill Gates and company stole the desktop operating system software market away from the sleeping giant. Now, in the 90's, it is IBM's time to gain back the market they once dominated. IBM has a terrific product with OS/2 and a decent opportunity to recapture the territory that they allowed to slip from their fingers while they sleep. If Louis Gerstner really wants to win with OS/2 and recapture the market that his predecessors so foolishly and so heedlessly gave away to Microsoft, he needs, promptly, once and for all, to put an end to any further sabotage of OS/2 by IBM's own internal divisions and do it now.

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January 1995: 11-12.

This article states when IBM announced OS/2 Warp 3.0 in grand Star Trek inspired style. IBM is trying to capitalize on both the Internet and a lot of popularity.

2. Berkowitz, Eric N., Marketing, Irwin, Second edition, Boston MA: 1989.

This reference book and text books explains all the marketing concepts a person needs to know to conduct day-to-day operations.

3. Baran, Nicholas., "IBM Has High Hopes for Multimedia on OS/2" Byte,  
November 1993: 110.

The author explains the things IBM faces in its effort to make OS/2 a major player in the PC operating system arena. Also, some advantages with the multimedia capabilities of OS/2 are explained.

4. Bradley, Johnson., "How Gerstner will Shape IBM Marketing"  
Advertising Age, March 29, 1993: 3, 46.

Louis Gerstner, IBM Corp.'s new chairman and CEO, said he would draw on his experience at RJR Nabisco Holdings and American Express to bring a customer's perspective to IBM.

5. Clair, Whitmer., "IBM's Warp Beta 2 Bolsters Links Between OS/2,  
On-Line Services" InfoWorld, August 15, 1994: 6.

IBM will soon release a revamped beta of its Warp version of OS/2. Warp Beta 2 will focus on improving links between OS/2 users and online services.

6. Coffee, Peter., "If Warp the Answer, What is the Question?" PC Week,  
November 7, 1994: 36.

The author explains the initial impressions of IBM's OS/2 Warp operating system upgrade and he also indicates that this new product has some potential, but it also exhibits serious flaws.

7. Coffee, Peter., "Trio Meets Diverse Demands" PC Week Special Report,  
November 14, 1994: 138-142.

Three recently released desktop operating systems with a 32-bit PC hardware is studied. Microsoft Corporation's Windows NT Workstation 3.5, IBM's OS/2 warp Version 3, and Apple Computer Inc.'s \$135 System 7.5 were slightly compared.

8. Cortese, Amy., "Windows of Opportunity for Big Blue?" Business Week,  
October 17, 1994: 184.

This article represents why IBM will be selling a lot more copies of Warp than was expected. It is the new package and all the improvements that would led IBM to sell more and compete against Microsoft.

9. Dodge, John., "What Prices will IBM Pay for Rushing WARP to Eager marketplace?" PC Week, October 24, 1994: 3.

This article focus its attention in IBM release of OS/2 Warp operating system in Oct. 94, before Microsoft released its rival Windows 95 platform, but it now looks that the IBM marketing strategy may have failed.

10. Flynn, Laurie., "Unsung OS/2 may Finally be Getting some Respect" The New York Times, Sunday, July 31, 1994: 8.

This article relates to IBM launching of an aggressive campaign to raise the noise level in the competition. Also, in September 1994 IBM is due to offer the new version of OS/2 that will offer faster performance than the current version and which can be run on only four megabytes of memory.



11. Foley, Mary Jo., "Users See Fewer Warp Bugs", PC Week, November 21, 1994: 31-32.

This article explains that initial users are finding few bugs in IBM's Warp OS/2 operating system during installation, with only a handful of hardware and software peripheral problems being reported on OS/2 forums.

12. Gillooly, Brian., "IBM Marketing Group Reports Record Sales for its Software Products" Computer Reseller News, April 4, 1994: 81, 154.

Record sales have been reported by IBM's Corporation Personal Software Marketing group for many of its software products, including OS/2. The company's system integrator distribution, marketing, and technical support program have been credited for much of the increase.

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This little reference book explains the history of IBM and its products. Most of the information is from the 70's and 80's.

14. Johnson, Bradley., "How Gerstner Will Shape IBM Marketing"

Advertising Age, March 29, 1993: 3,46.

Louis Gerstner Jr. is expected to start as chairman-CEO of IBM Corporation on April 1, 1993. Gerstner will likely delegate computer marketing responsibilities to executives who know the field.

15. Lewis, Peter., "New Shot by IBM at Rivals" The New York Times, September 8, 1994, Section: D: 1.

This article mentions the IBM's hoping to revive its desktop software business and exploit a delayed product introduction by the Microsoft Corporation. IBM is about to introduce a more powerful, consumer-friendlier version of the OS/2 software operating system for PCs.

16. Manes, Stephen., "Science Times: A Stormy Voyage on OS/2 Warp"

The New York Times, October 25, 1994, Section: C: 8.

The author reviews the new operating system (OS/2 Warp) which is the newest version and release by IBM. He reports some unfavorable reviews about the product.

17. Minasi, Mark., Inside OS/2 Warp Version 3, New Riders Publishing, Indianapolis, Indiana, 1995.

This complete book on how to use and optimize your system with OS/2 Warp is written by one of the top computer writers in the industry. Book explains everything in detail.

18. Patton, Carole., "Bundles are Bad News" ComputerWorld, November 14, 1994, Vol. 28 Number 46: 57.

Carole Patton explains the consequences that corporations face when they include other products as a bonus with the goods or services they offer. She even states "the bundling strategy is a prescription for destroying the Windows service applications market.

19. Perratore, Ed., "Pen for OS/2" Byte, November 1994: 112.

This article states how IBM sees multitasking as the key to moving OS/2 into the pen market. IBM's marketing strategy, which focuses on existing users is also discussed.

20. Poletti, Therese., "IBM Revamps Software Division as Gerstner Launches 2nd Phase", America Online, January 11, 1995: 1-2.

Analyst state in this article that Gerstner who implemented a successful financial turnaround at IBM since taking the helm at the computer giant in 1993, is focusing on boosting revenues now that its balance sheet is in order and its costs are lower.

21. Sager, Ira., "IBM: There's Many a Slip" Business week,

June 27, 1994: 26-27.

This article deals on how IBM is redesigning its PC lines to include commodity components that are in plentiful supply.

22. Scannel, Ed., "Developers Offered OS/2 Lures" ComputerWorld,

December 19, 1994: 4.

This article mentions the efforts IBM is putting to counteract the expected Windows 95 tidal wave. The most important aspect of the counteract is the act of putting the developers to work software applications that can run under OS/2.

23. Scannell, Ed., "Some Returns Dog OS/2 Warp Debut" ComputerWorld,

December 26, 1994: 5.

The author relates his experience with the product and states in the article the users confusion in trying to get the system to work. Also, Some users state that IBM should give a little more time for testing before going to the market.

24. Schtoeder, Erica., "IBM Revamps Voice Efforts with New Windows Software" PC Week, November 7, 1994: 6.

IBM brings some order to its disparate voice-recognition in an effort to capitalize on market share.

25. Semich, William J., "Surprise! OS/2 Is Taking Off" Datamation,

April 15, 1994: 43-47.

This article looks at how IBM is selling four times the rate of Windows NT. It looks like OS/2 for the moment has won the battle to become the desktop operating system for the future.

26. Somerson, Paul., "Warp Factors" PC Computing, October 1994: 39.

IBM's successor to OS/2, Warp, is too little to late. Microsoft's Chicago operating system looks set to win out over competitors, notwithstanding the recent Justice Department declaration that the operating systems market has been opened up, that are the authors thought.

27. Spangler, Todd., "Coordinating Big Blue" Business Marketing,  
September 1993: 94-96.

This article explains how IBM's marketing managers and sales reps were able to coordinate the amount of direct mail emanating from IBM's divisions and some of the company's 4,000 business partners.

28. Sullivan, Eamonn., "OS/2 Warp: Incomplete Desktop Solution"  
PC Week, October 24, 1994: 2, 147.

With this new version released, IBM has added support for Win32 applications for Windows users. In addition, OS/2 users may find the program difficult to install and Internet connections somewhat tenuous.

29. Udell, Jon., "Exploring Chicago and Daytona" Byte,  
November 1994: 132-146.

Windows 95 (Chicago) and Windows NT 3.5 (Daytona), two new operating systems from Microsoft are compared. IBM's new version of OS/2, which is tentatively called 'Warp' is also discussed in the article.

30. Wilstrom, Stephen H., "The Word on Warp: Whoops" Business Week,  
November 21, 1994: 15.

This article states that IBM's OS/2 Warp operating system promised users many of the same functions of Microsoft's Windows 95 operating system, but does not deliver. It also mentions that Warp seems to be a product that was rushed to market, despite being less crash-prone than Windows 95.

31. Zachmann, William F., "Where IBM Needs to Improve with OS/2"

OS/2 Magazine, March 1995: 17-18.

IBM's marketing literature fails to support their true commitment to OS/2 Warp, this is the authors feeling. Also, certainly, OS/2 is doing better than expected.

32. Zeichick, Alan., "Happy New Warp" OS/2 Magazine, January 1995: 7.

The author explains in details what Warp really means as a definition in the dictionary. And also states that OS/2 Warp is the best thing to happen to the OS/2 community.